DEVOTED TO AGRICULTURE AND ALL ITS KINDRED ARTS AND SCIENCES.

Agriculture not only gives riches to a nation, but the only riches she can call her own.—JOHNSON.

VOL. II. SATURDAY, DECEMBER 21, 1850. NO. 26.

S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

## CLOSE OF VOLUME SECOND.

ANOTHER volume of the Farmer closes with this number. As our readers cast their eyes over the index, or look over the volume, they will see that a large number of subjects have been presented for their consideration, during the year. Let us reflect on the past, and gather wisdom for future action.—We still find many doubtful subjects that require experiment, and further and more thorough investigation; for in many respects we are yet in our infancy. We must read, reflect, experiment, observe, and concentrate our energies upon the vast field of improvement that is spread out before us, inviting our attention. In this field, those of the humblest capacity can operate with success, and yet those of the highest attainments will find ample scope for their talents. Agriculture, like the heavenly manna, is adapted to all.

We are much obliged to our friends who have aided us in the circulation of the paper. Correspondents and others, who have contributed useful matter to our columns, and friends who have sent us specimens of new and valuable fruits, will please accept our grateful acknowledgments.

We respectfully solicit a continuance of favors. On our contributors we greatly rely to make the Farmer valuable and interesting. We think that a little more attention to this subject by some of our friends, would make this journal still more useful. Let every one contribute his mite, and aid in scattering useful knowledge broadcast over the land; and he may be assured that an abundant harvest will be the happy result of such combined effort.

In order to give greater efficiency to the publishing department, the proprietor has formed a copartnership with Mr. John Raynolds, of Concord, Mass., a gentleman who, for several years, has been extensively and favorably known to the business community, having been connected with several of the most prominent journals in this city. The business, hereafter, will be conducted under the firm of Raynolds & Nourse.

Another important arrangement in connection with this association, is, to publish a weekly agricultural and family newspaper. The agricultural department will contain nearly the same matter as this paper. The other department will be devoted to Domestic and Foreign Intelligence, Congressional and Legislative Proceedings, Literature, Education, Miscellaneous Reading, Temperance, Religious Intelligence, Marine News, Markets, Sales of Stocks, Bank Note Lists, &c., &c.

Since this plan was devised, the publishers, considering that there is a great advantage in the concentration of talent and the union of papers, have made an arrangement with Mr. William Simonds, of the Boston Saturday Rambler, to add that journal to their establishment; and the weekly paper will be called "New England Farmer and Boston Rambler." Excepting the agricultural department, the Weekly will be edited by Mr. Simonds, who has conducted the Rambler from its commencement. The character of that interesting and popular journal, and the extensive patronage it has received, are a sufficient guaranty that he will conduct his department with ability, candor, and faithfulness.

The semi-monthly New England Farmer will be continued in the same manner as heretofore, and at the same price; so that this new arrangement will not affect this paper otherwise than favorably, from an accession of strength in the publishing department, and a wider circulation, which will afford greater facilities and means for making, as we hope, a still more valuable journal.

Two numbers of the weekly paper will be sent to each subscriber to this paper, gratis, as specimens, (the first with this number;) and when they have perused them, if any choose to take the weekly instead of this paper, they will please give notice as early as possible.

All subscribers to the *Weekly* can have a bound volume of the semi-monthly, at the close of the year, for $1.

We would assure our readers that no pains or expense will be spared on the part of editors or publishers, to make both papers conducive to the interest and welfare of our readers, and we solicit their aid in extending our circulation, and in furnishing useful matter for the paper.

## MORE THOUGHTS ABOUT BUILDINGS.

The intense heat of the present and passing season brings to mind more thoughts in reference to arrangement in the construction of dwellings. Any way by which we may temper the intense heat of summer would be worth a vast amount, as respects not only comfort, but health.

The first and most obvious reflection, in this connection, relates to ventilation. Houses are often so constructed that no air can find its way into any of the rooms. The whole remedy for this is a right location of windows and doors, which should be so placed, with reference to each other, that a draught of air may be had through the house with the wind in any direction. It is particularly needful to see to it, so as to secure the draught at all events when the wind is south or south-west. These winds bring a suffocating heat, which, with all the air we can get, is barely endurable, but which, without a drop of air, is like the air of a heated oven with the oven-lid closed. A north wind will find its way into the house at all events. The east wind should also be afforded a passage through the house, since it often blows while the sun is intensely hot, and serves to brace the system, so as to make the time of its prevalence, within doors, eminently pleasant. These remarks apply to this lake shore, but it is possible that elsewhere they may not hold; but they will serve to put the reader on the track of the truth in any locality.

Another observation is, that verandas eminently become our western country; as do wide overhanging roofs, keeping the sun off the wall of the building, and serving to temper the air of the rooms. — Venetian blinds are also a great luxury. A set of these will cool a room several degrees during the heat of the sun; at the same time they shade it to any desired degree of light. Houses in the country are destitute of these blinds very extensively from the impression that they are merely an ornament — a notion very far from truth.

Then, again, in the way of building materials. It is a truth, that a house warm in winter will be cool in summer, from the fact that its walls are poor conductors of heat, and will as readily impede its transit one way as the other. A thin, rickety wood wall, with one coat of plaster, will be hot in summer and cool in winter. It is to be wished that unburnt clay might be tried more fully than it has, even though it be covered outside with boards. It is a non-conductor, and might conduce to comfort most essentially.

Another matter is the *shape* of our windows. We make them too short and too wide. They thus serve to heat the house in the summer much more than they ought. A long, narrow window will let in as much light as is needed, and will admit far less heat than one of the opposite shape.

Much might be said about shading the house with trees and vines. This may be carried to excess; and yet our climate, where the soil is dry, will admit more shade than an English or New England one, without the risk of dampness and the diseases which result from it. — *Prairie Farmer.*

## SCARCITY OF HOGS IN OHIO.

We perceive that the pork and hog dealers at Cincinnati are beginning to discover that the number of hogs to be sold in Ohio this year is far less than the past one; and in consequence, the price of hogs has advanced about $1 per hundred pounds, during the past two weeks.

In our paper of September 15, we gave the assessors' returns for thirty-six counties, which showed a falling off since last year of about 200,000 head. — Complete returns have been received by the auditor of state, for all the counties except Mahoning; and putting down that county with the same average ratio of decrease as the others, the deficiency for the whole state is, in round numbers, 275,000 head. This, though not as great as we had anticipated from the counties before given, will be found to affect the *surplus* to a very material degree — perhaps 50 per cent., as we notice that the greatest falling off is in those counties where the largest numbers are usually fed and sold. — *Ohio Cultivator.*

## SCOURS IN SHEEP.

Will any of your numerous subscribers inform the readers of the Wool-Grower what will cure sheep or lambs of the scours, as that disease is very common at this season of the year, and as yet I have found no cure? Yours,

LUTHER BOYD.

The scours is a kind of ardent purging or diarrhœa, brought about by sudden changes of food, and exposure to rough weather. The best and surest remedy against the evil, under all circumstances, is known by the name of English "Sheep's Cordial," and is prepared as follows: Take of prepared chalk, one ounce; powdered catechu, half an ounce; powdered ginger, two drachms; and powdered opium, half a drachm: mix them with half a pint of peppermint water. Give two or three tablespoonfuls morning and night to a grown sheep, and half that quantity to a lamb.

Mr. Randall, in his excellent work on sheep husbandry, gives the following simple remedy: "If the purging is severe, and especially if any mucus is observed with the fæces, the feculent matter should be removed from the bowels by a gentle cathartic — as half a drachm of rhubarb, or an ounce of linseed oil, or half an ounce of Epsom salts to a lamb. This should always be followed by an astringent, and, in nine cases out of ten, the latter will serve in the first instance. I generally administer, say one quarter ounce of prepared chalk in half a pint of tepid milk, once a day for two or three days, at the end of which, and frequently after the first dose, the purging will have ordinarily abated or entirely ceased."

Another Remedy for the Scours. — We find in one of our exchanges the following remedy against that disease, which may be valuable to our correspondents: —

"In scours, the surface evaporates too little of the moisture, and should be relaxed by diffusible stimulants in the form of ginger tea. The treatment that I have found the most successful is as follows: — Take four ounces raw linseed oil; two ounces of lime water; mix. Let this quantity be given to a sheep on the first appearance of the above disease; half the quantity will suffice for a lamb. Give about a wine-glass full of ginger tea at intervals of four hours. Let the animal be fed on gruel, or mashes of ground meal. If the above treatment fails to arrest the disease, add half a teaspoonful of powdered bayberry bark to each wine-glass of tea. If the extremities are cold, rub them with the tincture of capsicum.

"The feeding of pine boughs we have formerly practised, and think to be useful. Pine has a revulsive action on the skin, is stimulant and diuretic, and, if used occasionally, might be the means of preventing many forms of disease in animals."— *Wool-Grower.*

*For the New England Farmer.*

## THE CULTIVATION OF NATIVE TREES AND SHRUBS.

[Continued from p. 141.]

The Magnolias are beautiful trees and shrubs; the *M. glauca* is the only one as yet discovered growing naturally in Massachusetts.

The *M. acuminata*, or Cucumber-tree, with flowers five or six inches across, with its scarlet seeds depending from its cylindrical fruit, can be cultivated in the latitude of Boston in sheltered situations. — The *M. auriculata*, or Long-leaved Cucumber-tree, with its beautiful foliage, large and fragrant flowers, attains the height of forty or fifty feet. The *M. tripetala*, or Umbrella-tree, rises to the height of thirty or forty feet, with leaves six inches in diameter, and twenty inches in length, growing in a spreading form, from the extremity of its shoots, fancifully resembling an open umbrella; hence its name. The flowers open the last of May, and some of them are eight inches in diameter. The beautiful rose-colored seeds burst the cells of its conical fruit, and hang suspended, for a few days, by their slender filaments. We have cultivated the Umbrella-tree for several years, and find it perfectly hardy; and it would probably succeed farther north. It flourishes best in a sheltered garden, when growing with evergreen trees, and has a fine tropical appearance.

The Sassafras is a tree of the second class, rarely reaching thirty feet in height, although we have several trees in Danvers with a trunk measuring four feet in circumference, and a height of forty feet. It belongs to the Cinnamon family of plants, and the only genera found in Massachusetts are the Sassafras and Feverbush. In the early history of New England, it formed an important article of export, and ships were sent home to England laden with dried codfish and sassafras. This tree has long been celebrated for its medicinal properties. Michaux considered it one of the most interesting trees of the American forest. It is easily cultivated in almost every variety of soil.

The Coffee-tree is distinguished for its fine appearance when clothed with its foliage, and for its dead and lifeless appearance when deprived of it. It has not as yet been found in Massachusetts, although it is seen as far north as Canada. The fruit consists of crooked pods, containing large seeds, used, in the early settlement of Kentucky, as a substitute for coffee, from whence it derived its name. We have found it sufficiently hardy to endure the severity of our winters.

The American Judas-tree, sometimes called the Red Bud, is an early flowering, small tree, and deserves a place in a large garden; it is conspicuous for its large heart-shaped leaves, and its handsome rose-colored flowers, which appear in bunches along its branches before the appearance of the leaves. It received the appellation of Judas-tree from the supposition that it was the one on which the traitor hung himself; but Genard, an old English botanist, says that it was the Elder on which Judas committed suicide!

The American Aspen is a small, graceful tree, with many poetical associations connected with it, and is proverbial for the quivering motion of its leaves. Its cultivation is desirable near dwelling-houses, from its neat appearance, and the pleasing rustling noise of its leaves when gently agitated by the summer breeze.

The River Poplar is found in this state, and is said by Mr. Emerson, in his work on the trees and shrubs of Massachusetts, to be a noble tree, rising often to the height of eighty feet or more, with a fine, long, open head. The River Poplar, he continues, deserves to be cultivated as an ornamental tree. It is much the tallest and most graceful of those which grow naturally in New England. Its foliage is equal to those of the Balm of Gilead in size, and superior to it in depth of color; and the abundance of its ornaments in spring, and the rich colors of its leafstocks and young branches when growing in somewhat dry situations, make it a beautiful object. By selecting cuttings from the sterile tree, the evil complained of in the cotton of the Balm of Gilead will be avoided; and the tree is of equally rapid growth, and taller and more shapely. It has been extensively introduced in England and France, where it is valued for its beauty and for its wood. Loudon says, that the fine poplar avenues in the lower part of the garden of Versailles are of this species. In England it is called the Canada Poplar; in France, Cotton-wood. This tree occurs on the banks of the Connecticut, above and below Springfield; on the Chicopee, at Chicopee Falls; and in various places on the Agawam or Westfield River.

The American Mountain Ash is abundantly found on the mountains of Massachusetts. It resembles the European Mountain Ash, but is smaller. The last-mentioned tree, in consequence of its larger size, is the one usually cultivated as an ornamental tree.

The Thorns are beautiful, round-headed, small trees, which deserve more attention than they usually receive. Four species are found in Massachusetts.

The American Larch, or Hackmatack, is occasionally cultivated as an ornamental tree; the European Larch, however, has very generally taken its place in cultivation.

The American Hornbeam is a small, round-headed tree, very widely disseminated, being found in all the states of the Union. It is one of those trees that seldom fail to attract the notice of the most careless observer. Its trunk is grooved like a pillar, its leaves are very thin and delicate, and its fruit is an eight-sided nut. It is very distinct in its appearance, usually found growing by itself, with many branches, and a crowded, leafy head. Mr. Emerson says, the crimson, scarlet, and orange of its autumnal colors, mingling into a rich purplish-red, as seen at a distance, make it rank in splendor almost with the Tupelo, and the Scarlet oak. It is easily cultivated, and should have a corner in every collection of trees. The European Hornbeam is used in England for hedges; ours, which it very much resembles, would probably answer for the same purpose.

S. P. FOWLER.

Danvers New Mills, *Dec.* 6, 1850.

[to be continued.]

*For the New England Farmer.*

## FOOD OF PLANTS.

Mr. Editor: An adequate supply of proper food is essential to the growth and full development of every species of plants in the vegetable kingdom. Some subsist on air almost entirely, and will live and grow suspended in that element. Others thrive by being immersed in water, or they float about on its surface; even rocks and the trunks of trees are covered with luxuriant crops of mosses or lichens; but a large portion of vegetables require that their roots should be fixed in the earth, from which is extracted various substances suited to the wants of each particular species, and which substances they are found to contain on chemical analysis. In forests, where nearly all is returned to the soil by fallen leaves and decaying trees, a constant state of fertility is kept

up; but with cultivated lands the case is very different; the crops are removed from the soil, and unless some equivalent is returned, it will fail to produce a full amount, and in a few years will cease to repay the labor of cultivation.

Our first object should be to ascertain what kind of food is required for each variety we have under cultivation; secondly, the proper amount to be applied; and thirdly, to furnish that amount in some form or other.

Plants, as well as animals, sometimes die of starvation, as well as of surfeit. Instances are of common occurrence, where a large supply of highly concentrated manure has been applied with disastrous results; and who has not observed the effects which the want of the proper quantity produces? Fruit-trees frequently remain stationary for years, for the simple reason that they have consumed nearly all the food within their reach.

Many will condemn some of the substances used as fertilizers. It may be gypsum, for instance: having applied it, they see no good results. The reason is obvious: the soil contained enough of that substance before. It is so with potash, or phosphate of lime, or any other substance of which a sufficient quantity already exists in the soil. The best way to proceed is, to employ all the important substances essential to the growth of plants; and these are few: by so doing we can scarcely fail to reap a harvest worthy of our labors. Farm-yard manure is said to contain all these substances, and it seldom fails to produce a good crop when applied in the proper quantity. Chemistry has shed much light on the subject of manures within a few years, and every cultivator of the soil should make himself familiar with the different fertilizers, their effect on various kinds of land, and the proper amount to be applied. The subject presents a wide field for research and investigation, and upon it mainly depends the success of the husbandman in obtaining profitable returns for his labor.

O. V. HILLS.

Leominster, *Dec.* 1860.

## IMPORTANT DISCOVERY — LARD RENDERED FLUID BY MIXING WITH ROSIN.

Professor Olmsted, of New Haven, has lately made the important discovery, that, by adding one pound of powdered rosin to three pounds of lard, well stirred together, the mass becomes semi-fluid at 72° F., and on being melted, which it does at 90°, notwithstanding if melted alone the rosin requires 300° and the lard 97° of heat, the compound will remain transparent and limpid at that temperature. As it cools, a pellicle begins to form on the surface at 87°, and at 76° it remains a dense semi-fluid.

The discovery of the above-named fact will be of great importance to those who use lard lamps, as the lard is rendered more fluid by the rosin, and the power of illumination increased two fifths; yet, after two hours' burning, it loses its brilliancy on account of the wick becoming clogged. This will not be an important objection in families, while in point of economy the gain will be considerable; for lard is worth three or four times as much as rosin.

To machinists, the discovery is very important, as it enables them to make use of lard instead of oil, which is not only a saving in cost, but, what is of far more importance, the addition of the rosin completely neutralizes the quality of acidity in the lard, which corrodes metals, particularly brass and copper, to such a degree it is unfit to apply to any thing not in constant use. Professor Olmsted says, a thin coating of the compound laid upon a grate or sheet-iron stove with a brush, as thin as possible, will keep it free from rust all summer, although stored in a damp place.

To soap-makers, the discovery is also important. If one pound of the compound is added to two pounds of common Windsor soap, the quality is greatly improved, and the tendency that soap has to grow rancid, when in use or kept moist, is thus entirely prevented. A shaving cream, of an excellent quality, may be made by taking a cake of good shaving soap and steaming it soft in a close cup, and mixing half its weight of the compound, and working it well together; adding a little oil of almonds, or any other agreeable flavor.

The same compound, applied to boots and shoes, renders them nearly impervious to water, and, if applied to the soles, will not soil the floor. The uppers will be soft and pliable, and not prevented from receiving a blacking polish.

For oiling carriages, the mixture of lard and rosin will be valuable; and when wanted for heavy wheels, a proper consistency may be given to it by adding wheat flour, or, if greatly preferred, black lead.

No doubt the soap paste above described would be a good lubrication for carriage wheels. We hope this discovery will increase the consumption of lard, and thereby give an improved market to the farmer, and thus enable him to turn land into lard, and lard into light, and, in the mean time, enlighten his mind and improve his condition. — *Am. Agriculturist.*

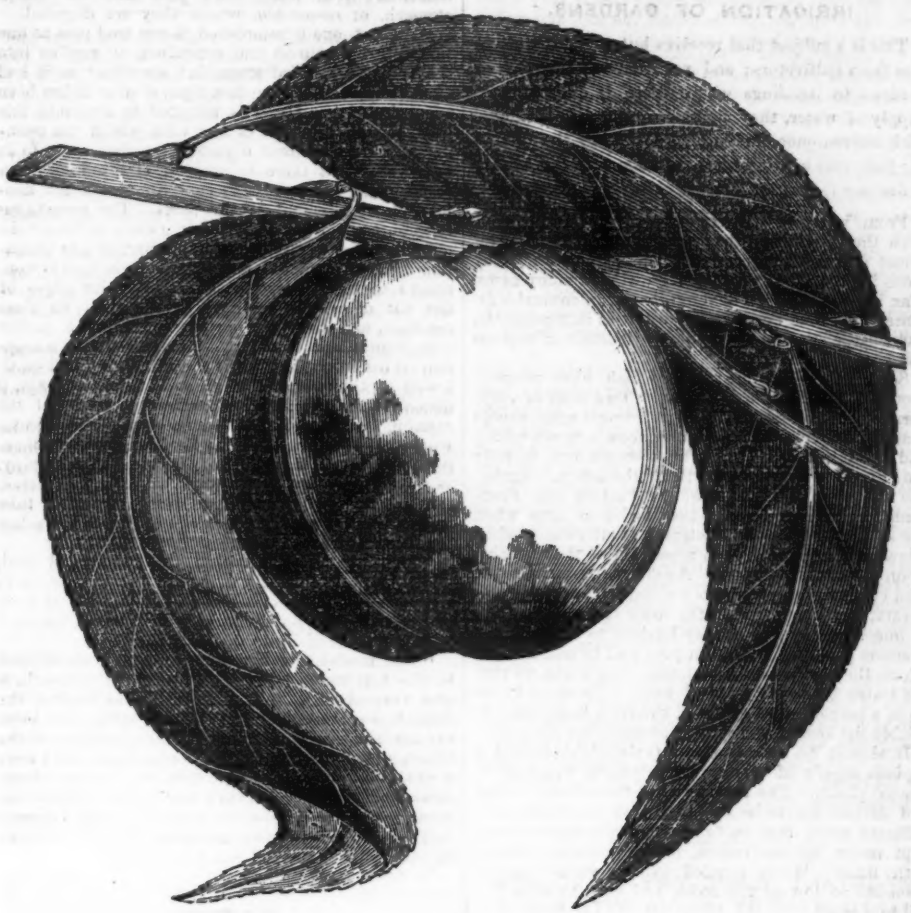
## CARROTS FOR HORSES.

It is admitted by every one who is at all acquainted with the great nutritive qualities of the carrot, that as a winter food for horses, to use in small quantities daily, — say half a peck to each horse, with their dry food, and especially in the absence of green provender, — it is of the utmost value. It not only possesses fattening properties equal to oats, — taking bushel for bushel, — but it secures to the horse, in the winter season, fine health, a loose skin, and a glossy coat of hair, which it is impossible to produce except by the use of the carrot.

To those keeping horses, who do not raise their own carrots, we would hint that now is the time to procure a supply, while they are being harvested. About twelve bushels to a horse, we think, would be sufficient. They should be buried in the usual way, and taken out, a bushel at a time, as they may be wanted. They will in this way keep plump and fresh as the day they were taken from the field. — *Germantown Telegraph.*

## FARMERS' ICE HOUSES.

A correspondent of the Massachusetts Ploughman, in a communication to the editor, says, "At the first time I commenced using ice, it cost me more than thirty dollars a year; and I had not half the benefit in the use of it that I now do, at the cost of three or four dollars per annum. I have tried various ways to keep ice, and have come to the conclusion that in every neighborhood there should be an ice-house of sufficient capacity to contain and keep ice for the whole neighborhood: this should be built as near to where the ice is made as convenience will admit, and if there be no natural pond in the district, it will be very easy to make an artificial one, as a cake of ice four rods square, of usual thickness, if well secured, would supply a large neighborhood of farmers; and as soon as the ice is of sufficient thickness, it should be secured, for the first made ice is of twice the value that late made is; it keeps better, splits better, and is better in every respect."



## CRAWFORD'S LATE MELOCOTON PEACH.

SYNONYMES — *Crawford's Late; Crawford's Superb.*

This peach originated in Middletown, New Jersey, a few years since, and it is now cultivated in most parts of the country where the peach flourishes. In some sections it is cultivated very extensively, and is among the finest late peaches for the market.

The fruit is very large; roundish-oval, with a shallow, but distinct suture; yellow surface, with a broad, dark-red cheek; flesh deep yellow, red at the stone, melting, juicy, rich vinous flavor. Freestone. In New England it ripens late in September, and early in October, and in cool locations and unfavorable seasons it is too late to come to perfection. The tree is hardy, vigorous, and productive. Globose glands. Small flowers.

This peach is sent in large quantities to this market from New Jersey. It ripens in that state about the time of the Early Crawford in this region. These two varieties are among the most valuable kinds cultivated in the country.

### CORN FOR THE WORLD'S FAIR.

The State Board of Agriculture are making up a collection of samples of Indian corn for the World's Fair; and we invite farmers, who have handsome samples, to bring or send to our office, say half a dozen ears of each distinct kind, with the husk on, if convenient; also as many full-grown stalks with ears on, cut up before over-ripe. The names of the growers will be affixed to samples sent. — *Ohio Cultivator.*

It is said that a small piece of resin, dipped in the water which is placed in a vessel on the stove, will add a peculiar property to the atmosphere of the room, which will give great relief to persons troubled with a cough. The heat of the water is sufficient to throw off the aroma of the resin, and gives the same relief as is afforded by a combustion of the resin. It is preferable to combustion, because the evaporation is more durable. The same resin may be used for weeks.

## IRRIGATION OF GARDENS.

This is a subject that receives but very little attention from cultivators; and yet from the nearness of gardens to buildings where there is often a good supply of water, they might frequently be irrigated with convenience and profit. We copy the following judicious article from J. J. Thomas, in the Albany Cultivator: —

From repeated experiments, we are induced to draw the conclusion, that next to manure, the great prime mover in successful culture, there is nothing more important to vegetable growth, in many cases, than irrigation. Practical gardeners, in countries far more moist than our own, regard it as indispensable, and a large share of their success depends on copious waterings.

Some interesting instances, which have recently occurred, may be worth stating. Two rows of raspberries stand on ground in every respect alike, except that one receives the drippings from a wood-house, and the other does not. The watered row is fully four times as large in growth as the other. Again: the berries on the bushes of the Fastolff and Franconia raspberries were at least twice as large when the soil was kept well moistened, as afterwards when allowed to become dry; a repetition of the watering again doubled their size. Again: a near neighbor, who cultivates strawberries for market, and who uses a water-cart for irrigating the rows, raised at the rate of one hundred and twenty bushels to the acre on common good soil by this means; and he noticed that where the cart was left standing over night, so that the water gradually dripped from it for some hours upon a portion of the plants, the fruit had grown to double the size of the rest, in twenty-four hours.

It should be observed that these advantages of a copious supply of water pertain chiefly to small or annual plants. The roots of fruit-trees, being larger and deeper, are to be supplied with moisture in a different way; that is, by a deep, rich, mellow soil, kept moist by cultivation, or by covering thickly with litter. Water applied to the surface rarely descends so low as the roots, and only hardens the soil to a crust.

## HOW RUMINANTS CHEW THE CUD.

As no answer has ever been given to our question relative to the process of chewing the cud (we do not use the vulgar term *quid*) among ruminating animals, (see Leaf, vol. i. p. 176,) we have thought the following extract from Ruschenberger's Elements of Mammalogy might prove interesting to many of our readers. This subject has been the theme of much profitable discussion among the members of the class in physiology in our school here, during the past week. More especially does it seem entitled to consideration, since there exists some diversity of opinion among authors who have attempted to explain it. W.

— *Scholars' Leaf.*

"When these animals (ruminants) feed, they swallow their aliments at first without having chewed them. These substances then enter into the paunch, and there accumulate; thence they pass into the second stomach, (reticulum;) but after having remained there for a certain time, they are carried back again into the mouth to be chewed, and afterwards swallowed again; and when they descend again into the stomach, they no more enter the paunch or reticulum, but go directly to the *manyplies*, (third stomach,) from which they pass into the fourth stomach, or *rennet-bag*, where they are digested.

"At first, one is astonished to see food pass at one time into the paunch and reticulum, at another into the *manyplies*, (third stomach,) according as it had been swallowed for the first time, or after it has been regurgitated; and one is tempted to attribute this phenomenon to a sort of tact with which the openings of these different digestive pouches seem to be endowed. But there is nothing of the kind; this result being the necessary consequence of the anatomical arrangement of the parts. The œsophagus terminates below in a species of gutter, or longitudinal slit, which occupies the upper part of the reticulum (second stomach) and the paunch, and is continued to the *manyplies*. Ordinarily, the edges of the slit of which we have just spoken lie close together, and then this gutter constitutes a perfect tube, which leads from the œsophagus into the *manyplies*, (third stomach;) but if the alimentary ball swallowed by the animal is solid, and somewhat large, it distends this tube, and separates the edges of the opening through which the œsophagus communicates with the two first stomachs; the food falls into these pouches; but if the alimentary ball be soft and pulpy, as is the case when mastication has been completed, the matter swallowed enters into this same tube without separating the edges of the slit, and reaches the third stomach.

"It is by this mechanism that unchewed food, which the animal swallows for the first time, stops in the paunch and reticulum; while, after it has been chewed a second time, and well mixed with saliva, it penetrates directly into the *manyplies*.

"The mechanism by which aliment accumulated in the first stomach is carried back to the mouth, is also very simple. When regurgitation begins, the reticulum contracts, and presses the alimentary mass against the slit-like opening which terminates the œsophagus; then this opening enlarges, so as to seize a pinch or portion of the alimentary mass, compresses it, and forms it into a small pellet, which engages in the œsophagus, the fibres of which contract successively from below upwards, to push forward the new alimentary ball into the mouth."

## THE GAIT OF THE HORSE.

Most people know when a horse walks, trots, or gallops; but very few can distinguish the philosophy of these movements, and the way they are done. There is, however, a method in these things, which is very plain when once found out. In walking, an animal lifts one foot at a time, and while the others are on the ground, so that the body is in no manner thrown even partly from the ground. A pace or rack is very similar, sometimes even precisely the same; but usually there *is* something like a side-at-a-time movement, very similar to the motion of a bear, or an elephant — a motion no way elegant, but for horseback riding very easy to the rider. In a word, it is probable, we may say, in the trot, the alternate fore and hind feet move together; in a pace, the feet on the same side; and in a gallop, the fore feet as well as the hind ones, move together. This may not be plain, but we think it very true, and it is at least the result of careful observation. For different uses, horses should be trained to different movements. A carriage horse, for instance, may be so trained as to have forgotten that he can gallop at all; and of this kind are our fast trotting horses, who never *break*. By proper management of a young horse, he may be taught a certain lofty movement, which very much, indeed, enhances his appearance in harness, and con-

sequently his value — an art well understood by few, yet very simple, plain, and easy. In this place it may be well to say, that heavy shoes on a horse will cause him to pick up his feet, raising them much higher than if he were barefooted, or if the shoes were light. This fact may suggest an idea in the management of stumbling horses, which do not lift the feet sufficiently high. Horses intended for carriages should not be ridden to spoil the pace, unless they are to be driven with breast collars, which is said to stiffen them. In the south, horses are always kept to one use, and consequently they are much better adapted, than in the north, to their various uses — a natural consequence, however, of increased wealth. In many parts of the world, the nature of the surface renders it unpleasant to ride in wheel carriages. This is the case in Kentucky. Here, horses for people not aged are ridden; and although in a very level part of the world this would be very tedious, among our hills, and rocks, and ridges, and beautiful scenery, it is fine riding, and one enjoys a ride more than any where else in the world, almost. Horses here are taught to pace, and are very fine for the saddle. A Yankee coming south, and trying to manage a trained horse, if it be a spirited one, is usually run away with, from trying to guide the horse with pulling one rein. Both reins should be drawn in the direction in which you would go, pressing the reins against the horse's neck; and the horses are the most tractable imaginable. Horses are made to pace by a twitching of the reins not easily described. Teaching the *pace* to them may be done by alternately jerking the reins, either with or without the half-pound lead weight strapped to the fetlocks. In riding or driving, the lines should always be held in one hand only. In the level southern country, horses are ridden on the gallop, or *lope*, as it is called, the roads being very even, but lying among plantations and through pastures with many gates to open. It has been said that a horse that can *walk* well can do every thing else well, and indeed, it is the most valuable gait a horse can have. In this, as in other movements, the rule may apply; get the horse to doing the thing, and then make him *keep doing it*. Horses and men do most things as a matter of habit, and habits are the result of practice; and almost any one may make a horse take the kind of action they desire. Many men, with great secrets in breaking horses, have travelled the country; and a revelation of the secrets shall form the subject of another article.

G. M. L.

Elliston, Ky., 1850.

— *Dollar Newspaper.*

## DOMESTICATING WILD FOWLS.

We have frequently called the attention of our readers to the subject of taming or domesticating wild fowls, especially water-fowls. There is no doubt that all the domestic fowls that we now have were obtained by taming them from a wild state. There may be many more domesticated in the same way, if pains were only taken to do it. Those who have tried the experiment, say that it requires them, or the species, to be tamed three generations, to bring them down to a thoroughly domesticated state. There are many splendid species of water-fowl, that, if tamed, would not only make useful additions to the flocks of the poultry-yard, but add greatly to the beauty of those flocks. For instance, that elegant and most beautiful of the duck tribe, known as the *wood duck*. We have known, occasionally, individuals of this species to be tamed in Maine, but have not heard of any systematic efforts being made to perpetuate them in a domestic state. The following, from the Family Visitor, gives the most authentic account that we have seen of any number being domesticated.

This account states that H. T. Kirtland, Esq., of Mahoning county, Ohio, succeeded, on several occasions, in domesticating that beautiful bird, and at one time had on hand a considerable flock.

He had trained a small dog so thoroughly that it would pass along the shores of the bayous in the vicinity, during the summer, where flocks of the old and young ducks were congregating, and before the latter were sufficiently fledged to take wing.

Alarmed at the approach of an enemy, the old ones would sound their peculiar notes and fly away, and the ducklings stealthily run on shore, and conceal themselves among the weeds and grass. The faithful dog would trace them out one by one, and as soon as he had detected one, would place it between his two forepaws, and retain it without injury. In this way he could take any desirable number. At one time he had a large flock that were full grown and in their full plumage, which in the males is more beautiful than the peacock, or any American bird.

They were restrained within the enclosures of his garden and door-yards, containing perhaps an acre of ground, and were apparently as tame as our common domestic Mallard, (the common tame duck.)

At a time when some of them were preparing their nests in hollow logs furnished them for that purpose, a mischievous polecat found his way into the premises, and destroyed several of the females. This interrupted them for that season. The survivors were neglected, and suffered to escape into a creek in the vicinity, and before the return of another season were destroyed by hunters.

We have been told that they have been domesticated by some farmers on Long Island.

There has recently been organized, in Boston, a society called the "New England Society for the Improvement of Domestic Fowls."

Would it not be a legitimate and praiseworthy object for this society to pay attention to this method of improving domestic fowls? They might offer inducements to those who are in convenient situations for taking and taming wild fowls, to do so. At any rate, their influence and scope of action would be greater than that of any single individual. We respectfully recommend it to their attention.

In the mean time, we should be happy to hear any facts bearing upon this subject, with which our readers could furnish us.

P. S. Since writing the above, the report of the committee of supervision of the first exhibition of Domestic Poultry has come to hand. We find by this, that E. S. Rand, of Dedham, Mass., exhibited specimens of the common or wood duck. Nothing more is said in regard to them. — *Maine Farmer.*

## MAKE YOUR OWN CANDLES.

Take twelve ounces alum for every ten pounds of tallow, dissolve it in water before the tallow is put in, and then melt the tallow in the alum water, with frequent stirring, and it will clarify and harden the tallow, so as to make a most beautiful article, for either summer or winter use, almost as good as sperms.

If the wick be dipped in spirit of turpentine, the candles will reflect a much more brilliant light. — *American Farmer.*

One of the sublimest things in the world is plain truth. — *Bulwer.*

## NOTICES OF PUBLICATIONS.

A Practical Treatise on the Construction, Heating, and Ventilation of Hothouses, including Conservatories, Greenhouses, Graperies, and other Kinds of Horticultural Structures, with practical Directions for their Management in regard to Light, Heat, and Air; illustrated with numerous Engravings, by Robert B. Leuchars, Garden Architect, Boston. John P. Jewett and Company, 17 and 19 Cornhill.

The design of this work is sufficiently indicated by its title. The author is distinguished for skill and thoroughness in his profession, and he has given to the public the result of much experience and extensive observation. It is a most excellent work, and we hail it with great pleasure, both on account of its high rank among the valuable productions of our country on cultivation, and as well adapted to fill a void, as we have no other work of this character before the community. The engravings, which amount to about seventy, are remarkably neat, both in design and execution. The whole work is very neatly executed, forming a beautiful volume, so that its execution is a credit to the publishers, as well as the matter to the author. The price is one dollar, and very cheap.

Hovey's Magazine of Horticulture is an excellent work, published monthly, at $2 per year, by Hovey & Co., Boston. A new volume commences with the year. Each number contains outlines and minute descriptions of several varieties of fruits.

Downing's Horticulturist is among the most interesting periodicals in our country. Published monthly, at $3 a year, by Luther Tucker, Albany, N. Y. J. Breck & Co., agents, Boston. Besides the general subjects of horticulture, this work embraces landscape gardening and rural architecture.

American Flora. — This beautiful and splendid work is published monthly by Green & Spencer, New York, at $3 a year. A new volume begins with the year. Dr. Strong, editor. This work has a large number of beautifully painted engravings. It ranks high in utility as well as in beauty.

Illustrated Natural History, by the same publishers and author, is issued once a month, at only $1 per year. The engravings are executed in so fine a style, that they look like *living* animals.

Water-Cure Journal. — The first number of this popular journal for 1851 has already made its appearance. It is much enlarged, without any addition to the price, which is only $1 per year. It contains a great variety of useful matter. The simple and abundant element, water, is, under judicious treatment, performing wonderful cures. Fowler & Wells, publishers, New York.

Farmers' Guide. — No. 13 of this valuable work is received of Fetridge & Co., Boston. The greater part of this number is devoted to the culture of the turnip and cabbage. It has numerous illustrations of seed drills, and insects that infest these plants. This is a valuable and cheap work.

The Illustrated Domestic Bible, by Rev. Ingram Collin, is a highly valuable work on account of its candid and able commentaries, references, and reflections. Hotchkiss & Co., Boston.

## ACKNOWLEDGMENTS.

Of J. W. Noyes, Chester, N. H., Hunter apples, which are considerably cultivated in that section. — A good grower, and good bearer every year. The fruit usually fair, and in use in November and December. This fruit, in size, form, and color, is nearly the same as the Hubbardston Nonsuch, and the flavor is nearly the same. As fruits vary from many circumstances, we cannot determine whether they are identical. We raised the Hubbardston Nonsuch this year in Maine, and when we received them we thought there was a mistake in the mark, as they varied from the usual form and color, and were generally russetty. But the flavor was true, and the finest that we have tasted for the season.

Of Henry Vandyne, Cambridgeport, a pear of medial size, very tender, and middle quality. He had it under the name of New Long Rosewater. He observes that some call it the Long Green of Autumn; but it differs in time and in form from that variety. Also, a good-sized Ladies' Sweeting apple, from scions set a year ago last June, which indicates that it is an early bearer from scions.

Of P. L. Converse, Woburn Centre, cooking pears, rather less than medial size. They keep through the winter. A great bearer. He found this tree on his place, and it is probably a native. We have cooked them, and they are of the finest quality.

Of James Baker, Newport, N. H., apples that are sweet and sour. Fruit having these qualities combined are generally very uneven on the surface, having ribs or prominences; and these projections differ slightly from the hollows between them. Yet we have never seen much difference, though we have tried many of this character. In these, the prominences are hollow, and are acid and sweet. The reverse of this is generally the case.

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be elegantly bound in muslin, embossed and gilt, at 25 cents a volume, if left at this office. As it is stereotyped, back numbers can be furnished to new subscribers.

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